

## AK-PENTOLATE - cyclopentolate hydrochloride solution/ drops

Akorn, Inc.

Rx only

### DESCRIPTION

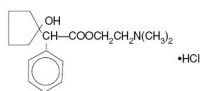
AK-PENTOLATE™ (Cyclopentolate Hydrochloride Ophthalmic Solution) is an anticholinergic prepared as a sterile, borate buffered solution for topical ocular use. It is supplied in two strengths.

#### Chemical name:

2-(Dimethylamino)ethyl 1-hydroxy- $\alpha$ -phenylcyclopentaneacetate hydrochloride

MW=327.85      C<sub>17</sub>H<sub>25</sub>NO<sub>3</sub> • HCl

The active ingredient is represented by the structural formula:



AK-PENTOLATE™ (Cyclopentolate Hydrochloride Ophthalmic Solution) USP, 1% & 2%

**Each mL contains: Active:** Cyclopentolate Hydrochloride 10 mg (1%) or 20 mg (2%).

**Preservative:** Benzalkonium Chloride 0.1 mg (0.01%).

**Inactives:** Boric Acid, Edetate Disodium, Potassium Chloride (except 2% strength), Sodium Carbonate and/or Hydrochloric Acid may be added to adjust pH (3.0 to 5.5) and Purified Water USP.

### CLINICAL PHARMACOLOGY

This anticholinergic preparation blocks the responses of the sphincter muscle of the iris and the accommodative muscle of the ciliary body to cholinergic stimulation, producing pupillary dilation (mydriasis) and paralysis of accommodation (cycloplegia). It acts rapidly, but has a shorter duration than atropine. Maximal cycloplegia occurs within 25 to 75 minutes after instillation. Complete recovery of accommodation usually takes 6 to 24 hours. Complete recovery from mydriasis in some individuals may require several days. Heavily pigmented irides may require more doses than lightly pigmented irides.

### INDICATIONS AND USAGE

Cyclopentolate hydrochloride ophthalmic solution is used to produce mydriasis and cycloplegia.

### CONTRAINDICATIONS

AK-PENTOLATE™ (Cyclopentolate Hydrochloride Ophthalmic Solution) should not be used when untreated narrow-angle glaucoma, or untreated anatomically narrow angles are present, or if the patient is hypersensitive to any component of this preparation.

### WARNINGS

For topical ophthalmic use only. Not for injection. This preparation may cause CNS disturbances. This is especially true in younger age groups, but may occur at any age, especially with the stronger solutions. Infants are especially prone to CNS and cardiopulmonary side effects from cyclopentolate. To minimize absorption, use only 1 drop of 0.5% cyclopentolate hydrochloride ophthalmic solution per eye, followed by pressure applied over the nasolacrimal sac for two to three minutes. Observe infants closely for at least 30 minutes.

Mydriatics may produce a transient elevation of intraocular pressure.

### PRECAUTIONS

#### General

The lacrimal sac should be compressed by digital pressure for two to three minutes after instillation to reduce excessive systemic absorption. Caution should be observed when considering use of this medication in the presence of Down's syndrome and in those predisposed to angle-closure glaucoma.

#### Information for Patients

Do not touch dropper tip to any surface, as this may contaminate the solution. A transient burning sensation may occur upon instillation. Patients should be advised not to drive or engage in other hazardous activities while pupils are dilated. Patients may experience sensitivity to light and should protect eyes in bright illumination during dilation. Parents should be warned not to get this preparation in their child's mouth and to wash their own hands and the child's hands following administration. Feeding intolerance may follow ophthalmic use of this product in infants. It is recommended that feeding be withheld for four (4) hours after examination.

#### Drug Interactions

Cyclopentolate may interfere with the ocular anti-hypertensive action of carbachol, pilocarpine, or ophthalmic cholinesterase inhibitors.

## **Carcinogenesis, Mutagenesis, and Impairment of Fertility**

Studies in animals or humans have not been conducted to evaluate the carcinogenic potential of cyclopentolate.

## **Pregnancy**

### **Pregnancy Category C**

Animal reproduction studies have not been conducted with cyclopentolate. It is also not known whether cyclopentolate can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Cyclopentolate should be administered to a pregnant woman only if clearly needed.

## **Nursing Mothers**

It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when cyclopentolate hydrochloride is administered to a nursing woman.

## **Pediatric Use**

Use of cyclopentolate has been associated with psychotic reactions and behavioral disturbances in pediatric patients. Increased susceptibility to cyclopentolate has been reported in infants, young children, and in children with spastic paralysis or brain damage. These disturbances include ataxia, incoherent speech, restlessness, hallucinations, hyperactivity, seizures, disorientation as to time and place, and failure to recognize people. Feeding intolerance may follow ophthalmic use of this product in infants. It is recommended that feeding be withheld for four (4) hours after examination. Observe infants closely for at least 30 minutes (see **WARNINGS**).

## **ADVERSE REACTIONS**

**Ocular:** Increased intraocular pressure, burning, photophobia, blurred vision, irritation, hyperemia, conjunctivitis, blepharoconjunctivitis, punctate keratitis, synechiae have been reported. **Non-ocular:** Use of cyclopentolate has been associated with psychotic reactions and behavioral disturbances, usually in children, especially with 2% concentration. These disturbances include ataxia, incoherent speech, restlessness, hallucinations, hyperactivity, seizures, disorientation as to time and place, and failure to recognize people. This drug produces reactions similar to those of other anticholinergic drugs, but the central nervous system manifestations as noted above are more common. Other manifestations of anticholinergic drugs are skin rash, abdominal distention in infants, unusual drowsiness, tachycardia, hyperpyrexia, vasodilation, urinary retention, diminished gastrointestinal motility and decreased secretion in salivary and sweat glands, pharynx, bronchi and nasal passages. Severe manifestations of toxicity include coma, medullary paralysis and death.

## **OVERDOSAGE**

Excessive dosage may produce behavioral disturbances, tachycardia, hyperpyrexia, hypertension, elevated intraocular pressure, vasodilation, urinary retention, diminished gastrointestinal motility and decreased secretion in salivary and sweat glands, pharynx, bronchi and nasal passages. Patients exhibiting signs of overdose should receive supportive care and monitoring.

## **DOSAGE AND ADMINISTRATION**

**Adults:** Instill one or two drops of 1% or 2% solution in the eye which may be repeated in five to ten minutes if necessary. Complete recovery usually occurs in 24 hours. Complete recovery from mydriasis in some individuals may require several days. **Children:** Instill one or two drops of 1% or 2% solution in the eye which may be repeated five to ten minutes later by a second application of 1% solution if necessary.

## **HOW SUPPLIED**

AK-PENTOLATE™ (Cyclopentolate Hydrochloride Ophthalmic Solution, USP) is a sterile ophthalmic solution supplied in white opaque plastic dropper bottles as follows:

AK-PENTOLATE™ (Cyclopentolate Hydrochloride Ophthalmic Solution USP, 1%)

2 mL NDC 17478-100-20

5 mL NDC 17478-100-10

15 mL NDC 17478-100-12

AK-PENTOLATE™ (Cyclopentolate Hydrochloride Ophthalmic Solution USP, 2%)

2 mL NDC 17478-097-20

5 mL NDC 17478-097-10

15 mL NDC 17478-097-12

**DO NOT USE IF IMPRINTED SEAL IS BROKEN OR MISSING.**

## **Storage**

Store at 20° to 25°C (68° to 77°F) [see USP Controlled Room Temperature]. Keep tightly closed.

**KEEP OUT OF THE REACH OF CHILDREN.**

**Akorn**

Lake Forest, IL 60045

CP00N

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